V. Peer Review Results

As part of the strategic technology planning process, Moss Adams conducted targeted peer reviews to identify best practices being utilized in other public entities as well as private organizations. This effort included identifying potential participants, contacting them to request input, and conducting interviews over the phone with those who agreed to participate. The following agencies/organizations were contacted for inclusion in the process. Those who chose to participate are indicated in bold:

- Cities: **New York**, Dallas
- Counties: **Maricopa**, Multnomah, **Orange**, **San Diego**, **Washington**
- States: California, **Connecticut**, **Pennsylvania**, Texas, **Washington**
- Federal: Singapore
- Private: Weyerhaeuser, Safeco

The following matrix provides the outcomes of this peer review process. The questions fall into the following six categories: organization and staffing; system architecture; efficiency, effectiveness and performance; service delivery; budgeting/funding; and vision. Lessons, themes, and/or trends are identified at the conclusion of each section.

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Organization and Staffing									
1. Number of employees in IS department	150	500	400 (200 contract)	330 (prior to outsourcing)	35	350 employees 650 union	22 Operations & technical support is outsourced	400+ in Central Services	3,000
2. Number of users	10,000	15,000	18,000	12,000	1,300	25,000	10,000	60,000	60,000
3. Ratio of government employees to technology staff	60 to 1	30 to 1	45 to 1	36 to 1	37 to 1	25 to 1	N/a	N/a	20 to 1
4. Number of agencies	20	60	26	44	10-15	60	Information not given	100+	130+
5. Type of environment	Decentralized	Decentralized	Decentralized	Decentralized	Centralized	Decentralized, moving towards centralized	Decentralized	Decentralized	Decentralized

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6. Technology management structure	• CIO organization • Central IT organization • Each agency has own IT group	• Enterprise (least amount of autonomy) • Electronic community (common systems) • Department (dept. specific)	• Data center managed by CIO • IT departments within larger agencies	• Most technology is outsourced • CTO manages applications and tele-communications, ERP system	• Systems administration • Client services • Application support	Information not given	• Operations and technical support for mainframe and mid-range systems has been outsourced • Applications and database support is still done in house	• Tele-communications • Computing services (mainframe) • Interactive technologies (Internet and video services)	• Each agency has its own IT department • Three data centers with mainframe
7. Control of Staff Costs	• Proposed by agencies • Approved by budget office currently	• Standardized prices for standard job descriptions, committed to pay 5% behind market midpoint, analyze online planning continuum for agencies.	• Hayes Study – based on skill levels, budget manages staff levels, contract manages outsourced people.	• Managed through contracts with outsourced vendor	• Agencies submit Business Plans to IT for approval, helps gauge infrastructure for the future	• Managed internally within each dept., appropriated by legislator, money is driven by customer needs	• Staffing levels are scrutinized and approved centrally.	• FTE plan that agencies have to adhere to. • Vacancies now and more expected with retirements	• Managed with budget, depends on workload and business requirements, agency specific
Analysis: • All decentralized environments have core centralized services; usually a data center and Internet support. Decentralization works well for the larger agencies, while a centralized environment is easy to manage for a smaller agency like Washington County. • All agencies report having trouble retaining skilled employees with government salary levels. Outsourcing options help alleviate this. • Control of costs, both for staffing and other costs ranged from tight budget controls to a more open structure intended to allow growth.									
System Architecture (including web/Internet)									
8. Mainframe systems and functions they serve	• AN07 = Assessor • ARMS = Finance • MSA = H/R • Law, Safety & Justice • Property Taxes	• One "enterprise server," IBM 0S/390 = Financial and H/R	• CAPS=P/R, H/R, Purchasing • ATS = Tax	• 2 IBM mainframes= Finance, H/R, Law and Justice	• (7) HP9000 Unix minis = Jail management, Financials, GIS, Permitting	• DB2 • IMS server • Sun Systems • Unisys • 2 IBM 9672's	• OS/390 • Unisys Clearpath • AS/400	• IBM • Unisys	• OS/390 (3)
9. Web enabled functions for public	• Largely static pages					• Static web pages			
• Residential Parcels	X	X							X
• Pet Adoptions	X	X	X						
• Court Dockets		X		X				X	

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• Job Applications	X	X	X					X	
• Restaurant Reviews	X	X			X				
• Bid Solicitation	X	X							
• Birth/Death/ Marriage	X		X						
• Board Meetings (listen)	X		X						
• Permitting/Licenses/ Tax	X (State)		X		X	X	X	X	X
• Voter Precinct/Register				X					
• Property Tax	X			X					
• Purchasing/ Contracting				X					
• Consumer protect/complaints						X		X	X
• Traffic/Mapping					X			X	
10. Web enabled functions for employees	• Intranet • Help desk • Benefits • County regulations • Job postings • Budget • Employee newsletters • Employee list/ contact info • Online polls	• Intranet • Agenda central = Board approval electronic • EBCTV = electronic business center TV, internal channels for training, presentations, etc. • Extranet (contractor openings, PC purchasing, office supplies	• Intranet • Data warehouse for CAPS (canned queries, ASP pages)	• Intranet, more when ERP rolls out	• Intranet, more interactive when ERP is fully implemented	• None	• Intranet	• Procurement • Electronic forms • Technology training • Retirement benefits estimator	• Intranet • Extranet • External hosting

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11. ERP systems:								None	
• AMS		X	X						
• Integral (HRMS)		X							
• Peoplesoft	X			X		X			X
• Oracle Financials	X			X	X		X		
• SAP							X		
12. Major changes anticipated in next 3 years	• Financial replacement project • Communications convergence • Peoplesoft upgrade • LS&J integration • Expanded e-government services	• Wireless emerging • Electronic learning	• ATM network (more resource intensive applications)	• ERP implementations, • Network more robust (maps, fingerprints)	• Storage Area Network (SAN) • FTP server • Additional web servers • Clerks recording system	• Browser-based applications • Remote access • Cyrix for agencies • Moving applications off of mainframe	• Server consolidation possibly using Linux • Continue web enablement of legacy systems	• Contact management system is being acquired	• Leveraging mainframe environment for more web hosting
13. Key Applications used (if known)						Not known		Too many to list	
• Finance	Oracle / ARMS	AMS	CAPS	Oracle	Oracle		Websphere, CICS		Fairfax
• Human Resources	Peoplesoft/MSA	HRMS	CAPS	Peoplesoft			SAP		Starts
• Law, Safety, Justice	Mainframe			JIMS (in-house)	Tiburon		LEMS		
• Transportation	Various						Websphere, IMS		Medallion
• Public Health	Mainframe		CDS				CICS		
• Roadway Mgmt	Mainframe	Road Runner							
• Assessor	Custom C/S		ATS						
14. Standards for operating systems	• MVS • Unix • NT • Novell	• OS390 • Windows NT/XT • Unix	• ASP (web development standard)	• Outsourced decision	• Windows NT		• Windows 2000	• No published standards, only recommended, flexible for agencies	• NT • Solaris

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15. Standards for databases	• Oracle • SQL Server • Access • Adabas	• DB2 • Oracle • Informix • SQL Server	• SQL	• Adabas • DB2	• Oracle • SQL Server, • Access	• Oracle • SQL Server • AAX = Peoplesoft • DB2UDB	• Oracle • SQL Server	• No published standards, only recommended, flexible for agencies	• DB2 • Natural • Adabas • Oracle • SQL
Analysis: • Most of the key applications being used are standard market applications, there are very few in-house applications being used. • Most of the agencies have multiple platform operating systems and database standards. • There was a wide range of web-enabled functions throughout the agencies from static information pages to complex interactive updated functions serving employees and the public.									
Efficiency, Effectiveness, and Performance									
16. Methods for optimizing technology	• Domain consolidation (planned) • Use of "off the shelf" systems • Centralized email and Internet web coordination	• Standardizing technology platforms for integration • Convert processes to electronic format • Governance model – right people for efficient planning	• ATM network • Recruitment system	• Information not given	• Centralization model • Manage organization as integrated corporation • Technology allowed to proliferate	• Server consolidation • Ecoscope (passive listening to traffic) • Centralizing servers • Metropolitan network • Fibering for education network for all towns • Standardization of skill sets	• Web enabling legacy systems • Using MQSeries message software to connect disparate systems	• Internet connectivity is very high in WA • Motivation to deliver services over the Internet	• Leveraging existing platforms and applications to web enabled services for government operations and public service delivery
17. Technology cost controls	• Negotiated enterprise software agreement • Use of master contracts	• Standardizations • Leverage high volume purchases (WSCA) • Managing government contracts	• Information systems requests (>$100k) • Low prices locked in with 10 year outsourced contracts • Hardware/software standards	• Contract with CSI for staff	• Agencies submit business plans to IT for approval • Desktop standards	• Architecture Review Board = ½ IT, ½ business managers within agencies review standards. • Central IT approves all consulting dollars and >$20k purchases	• All expenditures and plans must be reviewed and approved by the CIO	• Portfolio management approach, uses analysis of risk matrix, oversight category vs. higher risk, Information Services Board oversees	• None, have been investing in technology • Leveraging enterprise solutions to not replicate existing solutions • Centralized Steering Committee oversees

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18. Standards for technology development process	• Governance model – technology management board	• Governance model has 3 tiers: enterprise, electronic community and department level, all have different levels of autonomy	• CIO issues hardware standards	• Information not given	• Information not given	• Information not given	• Reviewed and approved by the CIO, new technology initiatives happen at the Enterprise level	• Board sets policy, agencies work as community to drive price	• None. In process of developing standards, security standards are in place
Analysis: • Trend toward centralizing specified manageable components. • Approval and oversight processes are in place to manage costs. • Technology standards specify different levels of autonomy for departments, agency groups, etc.									
Service Delivery									
19. Centralized Help Desk a.) Y/N b.) # of people c.) Tools used	a) Yes b) 5 c) HEAT (customized)	a) Yes b) 6 c) Support Magic and HP Openview for network mgmt.	a) Yes b) 20 (external and internal) c) unknown	a) Yes b) Outsourced through CSI c) unknown	a) Yes b) 2 c) Lotus Notes work order system	a) Yes (in development) b) 30+, outsourced through Compaq c) unknown	a) Yes (in development) b) Part will be outsourced c) Remedy	a) Yes, b) outsourced. c) Infoman (not sure)	a) Yes b) 5-10 c) in-house software
20. Outsourced vendor relationships									
• PC Maintenance		Sentinel	ACS	CSI	Unisys		Microsoft, IBM		
• Data Center			ACS	CSI	Unisys		Unisys		X
• Help Desk			ACS	CSI	Unisys	Compaq	Intellimark	Safe Harbor	
• Application Support		X	ACS	CSI	Unisys				
• Network Management			ACS	CSI	Unisys		Adelphia		
• Digital Certifications								Digital Signature Trust	
• Portal Search Engine								Ask Jeeves	
• Router Management							Verizon		
• Project Work/Short Term		X							

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21. Project management methods	• Project management board – efforts consist of project reviews and monitoring	• Macro level process using ROI and governance model	• Agency level, managed with budgets		• IS management team are project leaders, status reports are submitted to CIO.		• Major projects are funded at an Enterprise level where they can be given the necessary resources and priority	• Standardized, use University of WA PM training methodology	• Use MS Project as tool
22. Software development approach	Varies by agency	• Buy off shelf if possible without customizing, if build, then standardized templates are used (SDLC)	• CMM is standard, MS NT/2000, SQL server		• Unisys has programmers and db administrators, meet with IT managers to determine if s/w is available, if not what is priority, cost and supportability	• Mostly Java technology is used, although very hard to train	• Standards are in place for new server based applications • State wide contract with Microsoft to help with standardization	• Portfolio approach, determine if in-house, outsourced, or contractor	• Determine if resources are available in house, if not seek outside support
Analysis: • Agencies use either an ROI approach to looking at software development or a rigid approach to keep costs low. • Limited use of project management methodology. • Centralized help desk is the rule; requires standardized service delivery agreements. Based on staffing of this function, most help desks appear to serve a limited, central services function.									
Budgeting/Funding									
23. Technology budgets development	• Agency developed • Form for each technology project • Reviewed through governance process with recommendation by CIO and Executive Budget Office • Form for each operating budget	• Standardized process, online planning continuum, electronic communities set priorities for themselves, work with Board for central technology funding	• Budget is tied to business plan, 5 year strategic plan – published corporately		• Based on future projects and needs through strategic plan, 3-5 year picture		• Some projects are funded at the enterprise level with a technology investment program that provides seed money for important projects	• Portfolio management approach	• On agency-by-agency basis. Strategic plan with cost estimate goes to the Technology Steering Committee for approval

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24. Revenue generating technology outside of licenses/permits	• INET • Title companies	• GIS data to other jurisdictions • Telecommunication department sells two way radio communication	• None	• None	• Title companies pay for real time access to mapping systems • Gives METRO GIS data that they resell as packaged CD product that includes other County information	• None externally • Prisoner phone calls • PBX and phone design for agencies = $65M/year	• None	• None	• None
Analysis: • Technology budgets appear to be available and tied to strategic plans. • Very limited revenue generating technology.									
Vision – Overall Technology									
25. Technology vision		• "Information Technology will champion Maricopa County into Information Age Government"	• Not formalized • Steering committee drives vision	• Not formalized • Emphasis on moving to web	• Not formalized	• Website	• Website	• Website	• Website
Analysis: • Trend is for providing services, "online instead of in line." • Limited exploration of revenue generating opportunities. • Technology vision does not appear to drive technology management; many respondents could not identify the vision or provide clear instructions for accessing it on the web site.									